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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/673,383

09/26/2003

Bharat T. Doshi

Doshi 57-6-22-18-34

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09/04/2008

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EXAMINER

BATES, KEVIN T

ART UNIT

PAPER NUMBER

2153

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/673,383	<b>Applicant(s)</b> DOSHI ET AL.	
	<b>Examiner</b> KEVIN BATES	<b>Art Unit</b> 2153	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7-25</u> .  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Amendment***

This Office Action is in response to a communication made on July 31, 2008.

The Information Disclosure Statement filed July 25, 2008 has been considered.

Claims 1-18 are pending in this application.

***Claim Rejections - 35 USC § 101***

Claims 11-13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 11 is directed towards a network manager, it is clear from the specification (§82) that the call manager is a software application. Software applications are not patentable subject matter so the claim is directed towards non-patentable subject matter.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-3, 5-6, 8, and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi (6130875) in view of Kodialam (2002/0067693).**

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**Regarding claims 1 and 11**, Doshi teaches a method for determining primary and restoration paths for a new service in a mesh network having a plurality of nodes interconnected by a plurality of links (Abstract), the method comprising:

for each of a plurality of candidate path pairs for the new service, each candidate path pair comprising a candidate primary path and a candidate restoration path for the new service (Column 23, lines 55 – 64), generating a path cost associated with said each candidate path pair, wherein the path cost for a candidate path pair is a function of sharability of one or more links within the corresponding candidate restoration path (Column 25, lines 30 – 38); and

selecting the primary and restoration paths for the new service from the plurality of candidate path pairs based on the path cost of each candidate path pair (Column 27, lines 26 – 41).

Doshi does not explicitly indicate that the link cost is a function of the sharability of different corresponding links, wherein the sharability of the corresponding link corresponds to the ability of the corresponding link to reserve protection bandwidth that is shared between restoration paths of two or more primary paths.

Kodialam teaches a system of provisioning primary and backup paths (§27) that includes determining active link capacity based on the sharing ability of the links, where the sharing ability is determined in part by the amount of reserved bandwidth along backup paths (§30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kodialam's teaching of overbooking reserved bandwidth for

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backup paths in Doshi's invention to allow more optimal use of bandwidth capacity in a network.

**Regarding claim 2**, Doshi teaches the invention of claim 1.

Doshi does not explicitly indicate wherein generating the path cost for each candidate path pair comprises: generating a link cost associated with each link in the corresponding candidate restoration path; and generating the path cost as a function of a sum of the link costs for all links in the candidate restoration path.

Kodialam teaches wherein generating the path cost for each candidate path pair comprises: generating a link cost associated with each link in the corresponding candidate restoration path; and generating the path cost as a function of a sum of the link costs for all links in the candidate restoration path (§56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kodialam's teaching of overbooking reserved bandwidth for backup paths in Doshi's invention to allow more optimal use of bandwidth capacity in a network.

**Regarding claim 3**, Doshi teaches the invention of claim 2.

Doshi does not explicitly indicate that, for each link, generating the link cost comprises: determining whether sharing is available on the link; and if sharing is available, then generating the link cost as a function of a sharing degree for the link; wherein the sharing degree is the maximum number of additional unit-bandwidth primary services that can be added to the candidate primary path without increasing restoration bandwidth reserved on a link.

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Kodialam teaches a system of provisioning primary and backup paths (§27) that includes determining active link capacity based on the sharing ability of the links, where the sharing ability is determined in part by the amount of reserved bandwidth along backup paths and is concerned with how much additional unit bandwidth services can be added with respect to both primary and backup paths are already traversed along that link (§30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kodialam's teaching of overbooking reserved bandwidth for backup paths in Doshi's invention to allow more optimal use of bandwidth capacity in a network.

**Regarding claim 5**, Doshi teaches the invention of claim 3, wherein the link cost is also generated as a function of an administrative weight for the link (Column 35, lines 19 – 24).

**Regarding claim 6**, Doshi teaches the invention of claim 3, wherein the link cost is also generated as a function of a form of a sharing degree (Column 23, under FC header in the table, where FC takes into account capacity that has been reserved for restoration path as free capacity is increased).

**Regarding claim 8**, Doshi teaches the invention of claim 1, wherein the sharability of a link in a candidate restoration path is represented by a sharing degree for the link, wherein the sharing degree is a maximum number of additional unit-bandwidth primary services that can be added to the candidate primary path without increasing restoration bandwidth reserved on the link (Column 23, under FC header in

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the table, where FC takes into account capacity that has been reserved for restoration path as free capacity is increased).

**Regarding claim 13**, Doshi teaches the invention of claim 11, wherein the network manager is located at a single node of the network (Figure 6, element 54).

**Regarding claim 14**, Doshi teaches the invention of claim 1.

Doshi does not explicitly indicate wherein the path cost is independent of the sharability of any link within the corresponding candidate primary path.

Kodialam teaches wherein the path cost is independent of the sharability of any link within the corresponding candidate primary path (§56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kodialam's teaching of overbooking reserved bandwidth for backup paths in Doshi's invention to allow more optimal use of bandwidth capacity in a network.

**Regarding claim 15**, Doshi teaches the invention of claim 2, wherein the candidate restoration path comprises at least two links (Table in Column 23, under the G function, this shows that it travels all the links of all the possible routes between the two points in the network, thus ensure each route can have at least two links).

**Regarding claim 12**, Doshi teaches the invention of claim 11.

Doshi does not explicitly indicate wherein the network manager is distributed over the network.

Examiner takes Official Notice (see MPEP § 2144.03) that "the central manager in Doshi can be distributed over the network in order to provide redundancy or load

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balancing in the network". The Applicant is entitled to traverse any/all official notice taken in this action according to MPEP § 2144.03, namely, "if applicant traverses such an assertion, the examiner should cite a reference in support of his or her position". However, MPEP § 2144.03 further states "See also *In re Boon*, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice)." Specifically, *In re Boon*, 169 USPQ 231, 234 states "as we held in *Ahlert*, an applicant must be given the opportunity to challenge either the correctness of the fact asserted or the notoriety or reputation of the reference cited in support of the assertion. We did not mean to imply by this statement that a bald challenge, with nothing more, would be all that was needed". Further note that 37 CFR § 1.671(c)(3) states "Judicial notice means official notice". Thus, a traversal by the Applicant that is merely "a bald challenge, with nothing more" will be given very little weight.

### ***Allowable Subject Matter***

Claim 18 is allowed.

Claims 4, 7, 9-10, and 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

Applicant's arguments filed July 31, 2008 have been fully considered but they are not persuasive.

The applicant argues that Doshi does not disclose generating a path cost based on two or more link costs. The examiner disagrees; Doshi calculates the path cost based on a consideration of each link across that path as shown in column 23. If the minimum capacity across all links is considered when picking a path route, then two or more link costs are considered.

The applicant argues that Kodialam does not disclose anything about link costs. The examiner disagrees; as seen in the abstract, Kodialam is concerned with determining back up paths based on link weights and costs. Plus Kodialam is not being relied upon for the teaching of calculating link costs, only that determining back up paths is in part determined by considering the amount of reserved bandwidth along backup paths.

The applicant argues that Kodialam does not disclose summing all the link costs for all the links in the restoration path. The examiner disagrees; Kodialam teaches that restoration paths are determined based on shortest path determinations of each link along the path as seen in ¶56.

The applicant argues that Kodialam does not disclose determining link costs based on unit-bandwidth primary services that can be added to a path. The examiner disagrees; Kodialam teaches that determining the use, capacity, or cost of a link is determined based on the determinations of which bandwidth was reserved for primary

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vs back-up paths where the link-usage information is determined more based on the primary bandwidth usage, while trying to reuse the backup path capacity reservation.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN BATES whose telephone number is (571)272-3980. The examiner can normally be reached on 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Bates/  
Primary Examiner, Art Unit 2153